CALIFORNIA WATER PLAN UPDATE 2018

Sustainability Outlook and Indicators Workshop

Meeting Notes

July 25, 2017

Bonderson Hearing Room

901 P Street, Sacramento, CA 95814

9:00 a.m. to 3:00 p.m.

ABSTRACT

During the Sustainability Outlook and Indicators Workshop, the California Department of Water Resources (DWR) presented the group with a working draft for California Water Plan Update 2018, Chapter 2, the Sustainability Outlook. The group discussed the structural and contextual goals for the chapter, stated the importance of sustainability, and considered its relevance today and for tomorrow. A technical workshop on the same topic was held in June making this the second workshop for the Sustainability Outlook. This workshop focused on receiving input and recommendations on the intended outcomes and indicators presented for each of the societal values. Feedback on the impressions of the indicators as to how they could track to sustainability was specifically sought. The Water Plan team concluded review of each document section by opening the floor for questions and requesting recommendations from the group. One goal for the identification of indicators and intended outcome was to support a pilot study on the Sustainability Outlook. At the conclusion, the group was thanked for their time and input.

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ATTENDANCE

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DISCUSSION ITEMS

Introductory Remarks

Lisa Beutler, Facilitator, Stantec called the session to order, stated the expectations for interactions during the workshop, and provided a quick overview of the workshop format.

Lewis Moeller, Water Plan Program Manager, California Department of Water Resources (DWR) reviewed the agenda and stated the workshop objectives. The workshop was organized to deliver the context and planning logic for the California Water Plan Update 2018 (Update 2018). The team wanted to focus on the proposed water management outcomes of the four societal values, and receive feedback on the identified list of indicators in Chapter 2, the Sustainability Outlook.

Setting the Context

Lewis introduced the content of Update 2018. He oriented the audience with the direction of Update 2018 by explaining how past actions may not be on track to a sustainable future. He noted that changes need to be made across the state to improve water management. He used the idea that the combination of repair + ration + regulate does not put the state on the path toward sustainability. As noted in the past, the State has generally been more reactive in water management approaches. Update 2018 will be the shift to a proactive approach. Update 2018 broadens the concept of sustainability and improvement across all areas from the analytical framework that was developed in *California Water Plan Update 2013* (Update 2013).

Update 2018 Overview

Update 2018 will be a more focused, shorter document than past Water Plans. Lewis provided a brief summary on the key themes centered around sustainability for Update 2018. He assured the group that content from Update 2013 won't be lost. He also noted that Update 2018 will be aligned with the California Water Action Plan. He identified the issues that need more focus, including infrastructure, efficient governance and alignment, regulatory alignment centered on the ecosystem, the need for leadership for capacity building starting with a ground up approach, and funding.

He explained Update 2018 would follow a format that includes:

- Operational definition of sustainability.
- Water management conditions assessments.
- Actionable recommendations.
- Funding and revenue sources.
- Implementation: schedule, actions, tracking progress.

He presented a variety of graphics to show the current state of sustainability in California. He walked through a provided brochure that indicated sustainability isn't the end point but an ongoing, resilient, balance

between the four societal values. The brochure illustrated how future Water Plan updates will continually revisit sustainability making it is crucial to develop repeatable and meaningful parameters and metrics. He noted that an overall understanding of sustainability at all levels will help guide the efforts necessary for effective integrated water management and integrated regional water management (IRWM).

Chapter 2 Overview

Lewis then presented the four societal values that guide the assessment of sustainability in Chapter 2. The four societal values are public health and safety, healthy economy, ecosystem vitality, and opportunities for enriching experiences. Lewis explained how the values will be used for the initial investigation of sustainability and will lead to a pilot study. Under each societal value is a list of intended outcomes along with their corresponding indicators and metrics. The long-term goal of the Sustainability Outlook is to establish a single, comprehensive, and practical method for tracking and reporting on water management. The hope is to promote policy, through Update 2018, that will lead to shared agreement and alignment of water management actions across State government and California's diverse regions.

Lewis reiterated the challenge with tracking the progress of sustainability with respect to the dynamic needs and demands (values) of society. The means used to support values are not static. The exercise of the values evolves and continue to change as the as events occur, as society itself evolves, and as challenges arise.[1] Lewis noted the importance of keeping the overall picture in mind and how all of these values are connected, and that at different times each of the four societal values may receive more emphasis.

Update 2018 will create a framework with broad agreements around ways to achieve goals in support of societal values. Lisa noted that the path to sustainability is going to be a journey. She stated the need to affirmatively articulate what its looks like when systems properly work, identify the outcomes the State is seeking, and then proactively plan for the future. She asked the group to consider the bottom line and answer how the State can efficiently and effectively track progress across all local and regional scales.

Lewis answered a question from the audience regarding the relationship between varying landscapes and the four societal values. He explained that the indicators are used to track if things are working well, or not, by way of intended outcomes. This can be used as a way to evaluate the status of a given societal value in relationship to sustainability. The intended outcomes are used to define where the State wants to dynamically balance sustainability for each of the four societal values. He mentioned there is no need for there to be a hierarchy of issues or scales. Instead the Update 2018 approach will provide a baseline for tracking the progress of the intended outcomes developed for each societal value.

Understanding Water Management Sustainability and the Challenges, Drivers, and Disruptors

Tom Filler, DWR, explained Update 2018 will be action-based and outcome-driven. The team has been looking at the challenges, disruptors, and drivers to determine an improved method to sustainable water management. He reviewed some of the challenges that exist in all areas of water management, referring participants to the session workbook. For example, he explained water demand will be driven by increasing

[1] This refers to changing perceptions. For example, at one time there was little appreciation for California's wetlands and they were often viewed as useless unless they were filled for some other use.

population and how California is expected to experience more extreme hydrologic events in the future. He then mentioned that this year, a severe drought transitioned straight to the wettest year on the record. Groundwater levels are declining at significant rates throughout different parts of the state and challenges have been faced regarding the economy and its relation to communities. He emphasized how there is opportunity for the State to progress in the right direction, which can help bring people together across the state.

Tom revisited the Sustainability Outlook Lewis had introduced. He explained the framework will be used to assess effective water management and manage the water balance by the four societal values. The outlook will be used to identify State and regional policy-level priorities. It will focus its energy and resources on aligned actions across State agencies to ensure that water managers are working toward common goals and outcomes. He stated that the current conditions can be used as evidence and support to advocate for future assessments and needs.

He then explained the categories of the indicators used in Chapter 2. The indicators will be used to measure progress toward sustainability, describe how they will be used in the future, and will work as a toolbox for regional assessments. The outlook will be used to assess and adjust the direction in response to a changing environment, and will be applied at multiple scales.

He concluded by stating the hope is to create a better coalition among agencies, where people can evaluate the same indicators with a smooth alignment for proper water resource management. He thanked the audience for their time and feedback.

Lisa explained the type of feedback that the team was looking for. She wanted to know if the group felt that anything was potentially missed and if there was a better way to describe the framework.

Discussion

After a review of the information presented, the group was asked about their overall impressions and whether they felt any information was missing. Some suggestions from the group included:

1. Need to add some structure and content surrounding the relationship of framework and foundation. Specify that the State has defined a foundation before diving into the framework.
2. Data and measurement analytics deserves to be a primary issue. If something cannot be measured, then there is the chance it will not be managed.
3. Supply reliability should be a main consideration because it is an essential economic factor.
4. Under the topic of infrastructure, make sure to include and emphasize flood control.
5. Clarify that the Department of Finance forecasts are being used.
6. Graphics contain too much information. The concept and message get lost in translation.
7. Highlight the rapid change in urbanization in California and how that will change the stressors in those regional water areas.
8. Consider including under extreme events and aging infrastructure. Most of the engineered systems in parts of the state (i.e. Central Valley) were constructed in the 1800s, so they are a more critical concern as populations are shifting space and intended use is changing.

9. It would be helpful to restate the connection between the four societal values and the drivers in this section.
10. Need to establish a stronger baseline to move forward with this outlook and to be more explicit with the path: foundation → framework → intended outcomes → indicators to track progress → repeat.
11. Specify the scale and indicators at the statewide and regional levels as well as levels of outcome.
12. Make the size of scale more clear for the message that longer-term intended outcomes lead to sustainability.

Where We Started, Where We've Been, and What We've Heard

Where We Started

Megan Fidell, DWR, provided the audience with a timeline of the Water Plan updates and the evolution of the plan for Update 2018. She explained the process used to develop the initial set of sustainability indicators and provided background information about the shift in focus to be on the outcomes of actions instead of just measuring whether actions had occurred.

Megan presented the process used to measure success in working toward achieving sustainability for the societal values. She reviewed the graphics provided in the session workbook and explained how they have evolved. One identified tension was the tendency of statewide aggregated data to trend toward an average. She pointed out that the intent was not to show an average, but to provide an overview to direct resources to receive benefits at a statewide scale. She elaborated on the difficulties with using a statewide metric and how doing so can hide regional hotspots or acute problems and successes.

Where We've Been

Megan described the team efforts to develop the means to measure progress toward sustainability in Update 2018. The team spent months developing the outcomes and carefully placing them into one of the four categories. The outcomes are based on a variety of sources, a few referenced in the session workbook. The team has utilized sustainability indicators and metrics from existing information (such as the 2016 Water Action Plan, Flood Future Report, Sustainable Groundwater Management Act Strategic Plan, etc.) to establish the focus of the intended outcomes and track their achievement. The team also relied heavily on the work done in Update 2013. They have worked with disadvantaged communities (DACs) representatives and have presented the outcomes for comment to a variety of stakeholders.

Megan stated the limitations faced with the framework for Update 2018. For example, the Water Plan team has found it difficult to represent complex concepts in graphic form. The team also faced hurdles with data adequacy, availability, and accessibility. A lack of data is an impediment to generating useful information. The collection and analysis of data should be repeatable and allow for comparison over time. Another challenge is that there is not a centralized clearinghouse or consistent way to locate data, regionally or statewide. All this has led to Update 2018 presenting a general proof of concept rather than definitive analysis.

Megan explained how individual outcomes may achieve multiple societal goals.[2] Tom pointed out that the indicators must be specific, measurable, quantitative, and repeatable in order for the comparisons to show identifiable trends. In this way, the indicators help set priorities and it is possible to form recommendations for future efforts.

In selecting indicators, it is important to identify a vital few and minimize overlap so they can support trend analysis (especially where longer time frames are needed for effective assessment and modeling). In this way the indicators can be used as a tool to help communicate the vision for water management sustainability to water managers and the public.

This approach was contrasted with the previous Water Plan updates that had been organized more as a list of recommended actions. In those updates the goal was not to specify results but instead check off what had been achieved. Update 2018, the Sustainability Outlook, is set up to identify the trends toward (and away from sustainability) and use variation in them over time to assess the water management effectiveness in achieving desired outcomes.

What We've Heard

The concept of Sustainability Outlook has support from numerous stakeholders. Questions and observations offered throughout the various Water Plan meetings and workshops have typically related to how the desired outcomes would be selected and articulated. Through these discussions the Water Plan team has shifted the scale of investigation from representing just a statewide perspective to developing an approach that can be tailored to more regional and local levels, and aggregated to a statewide assessment. In this respect the Sustainability Outlook can be articulated as a statewide assessment intended to be utilized at smaller scales. Based on feedback, the Water Plan team has also made revisions to the desired intended outcomes to better reflect a specific societal value.

Tom prompted the audience, when describing desired outcomes, to consider to what extent is there a need to manage and avoid unintended consequences. He noted the importance in assessing actions in terms of how they could further impact something in the future. In describing desired outcomes and the changes need to achieve them, the Water Plan team wanted to make sure those changes would not exacerbate the situation or create new problems.

Discussion

After a review of the information presented, the group was asked about their overall impressions of the indicators and if they felt any information was missing. Some suggestions from the group included:

1. Reference the Strategic Growth Council integrated regional conservation development tool, as another potential data source.
2. The heat map was a good representation of conditions.

Scalability

[2] For example, a desired outcome might be acres of restored floodplains which could achieve public safety, support a healthy economy and environment, and also provide enriching experiences.

Tom continued the discussion around the scale of the Sustainability Outlook. Creating a regional application is a long term goal. This type of tool can provide more detailed information to local and regional decision makers. Update 2018 will not create this scale, but will be a starting point and its framework will be used to test the outcomes and indicators at varying scales in a pilot study.

The public has voiced the need for consistency in establishing consistent regional definitions and differences from existing regions (IRWM, groundwater sustainability agencies, and hydrologic regions) and to use these definitions in Update 2018.[3] A few of the open-ended questions that are being addressed in Update 2018 include:

- What is the appropriate geographic scale?
- Who is responsible for the regional-scale sustainability outlook?
- How will the regional scale be connected to the statewide scale, and vice versa?

Water management and sustainability should be reconciled between local and regional entities, and then progress from regional to statewide. The team is working to progress this along, as it is a big effort for the Water Plan. There needs to be a dynamic balance between sustainability and the tradeoffs. The team restated that sustainability is a journey; there will always be a shift with continual adjustment to better the needs of society.

Lisa led a discussion on the scalability issues with statewide policy and statewide funding. The team believes that if the sustainability outlooks can be properly developed, it can help align many State agencies in different areas. The group was asked if they had any ideas regarding statewide policy and funding on a regional scale. In addition, the team wanted to hear if the audience had any suggestions for the direction that the water management can do to further the process in other areas.

Discussion

After a review of the information presented, the group was asked about their overall impressions and if they felt any information was missing. Some suggestions from the group included:

1. Define the types of measurement, qualitative or quantitative, with regards to society as value-based or natural-systems based.
2. Address how to manage differing opinions on desired outcomes for individual societal values.
3. Place emphasize and define the scale when computing averages so that regional stresses can be seen.
4. Develop a textual piece that describes the focus on sustainability at regional scale watersheds to a statewide scale.
   a.) How will it be scaled up or down, and vice versa?
   b.) How will the State manage the varying projects based on geographic location?
   c.) How does one highlight the problems throughout the state without diluting the small areas with significant problems?

<u>Opportunities for Enriching Experiences Sustainability Indicators</u>

[3] This relates to the different scales and boundaries for regions used by state and federal agencies and how they may be in conflict with or inconsistent with one another.

Emily Alejandrino, DWR, initiated the discussion on outcomes and indicators for the societal value, Opportunities for Enriching Experiences. She explained how Update 2013 created a new strategy that discussed the connection between people, water and culture. In preparing desired outcomes and indicators for this value, the team received feedback from numerous surveys, discussions, and interviews. This information allowed the team to formulate the intended outcomes.

Emily reviewed the intended outcomes and metrics for the value as shown in the workbook. The intended outcomes are identified as:

- Preserved or enhanced, culturally or historically, significant sites and communities, including continued and enhanced access to water and land used for sacred ceremonies or cultural practices.
- Preserved and increased natural areas with aesthetic or intrinsic value (including view shed).
- Continued and enhanced access to resources that support education and learning.
- Continued or enhanced recreational opportunities in waterways, reservoirs, or natural and open spaces.

Lisa informed the group that this area has been one of the harder ones for people to view as an element in water planning. She explained the value and outcomes basically speak to the human relationship with water. In some cultures, and for many individuals, it is essential to interact with water in more than a consumptive relationship. She expressed that the outcomes expressed for this value acknowledged and respected that need.

Emily read a few examples of the indicators and stated how its development is a work in progress. She explained that because it involves a personal connection to water, quantifying a universal outcome can be difficult. Water managers in the past have not had to think about water environment as a factor in human well-being or how this relationship makes people feel. She said the Water Plan team wanted feedback that would help them get closer to defining this value and expressing outcomes and indicators that would lead to policy development.

Lisa also mentioned that the Water Plan team has heard that in identifying indicators there needs to be a continuum for measurement instead of just an “is /is not” or “yes/no” metric. It was felt this would allow for better tracking. She also said that some of the indicator areas relate to cultural practices (for example, access to water for spiritual ceremonies) and that the team needs to determine how to scale those measurements because some of these requirements are place or seasonally based.

Discussion

After a review of the recommendations, the group was asked their general impressions of the indicators, and for red flags or any improvements they had, for the section. Suggestions from the group included:

1. Clarify there are lifestyle changes and cultural practices around conservation of water. Specify that conservation is a method, not an outcome, and that the outcome is that people will have an available water source.
2. Push to ensure that there are educational practices around conservation and sustainable practices.

a.) Start educating people at a young age.
b.) There is a shortage of people educated in geology, geophysics, and geosciences. This focus could encourage more people to enter these fields.

3. One audience member expressed appreciation for including this area as it is the crux of her culture.
4. Reference the State Board beneficial use definitions for the tribal communities moving forward
5. Need to establish a way to articulate a synched description of value with its aspirational aspect. Classroom experiences can add value and enlighten students, thus creating an appreciation for water
6. Focus on education and learning by expanding some of the indicators to multi-generational learning and include topics related to DACs.
7. Focus on intended outcomes with prioritized programs as well as existing and future parks and natural areas.
8. Prioritize State investments for parks and recreational opportunities.
9. Push for open-data projects by touching on the data gap that exists from what the state collects by engaging local and regional areas.[4]
10. Under the last intended outcome, visitor user days could be location sensitive so the data percentage as a statewide map might be a good way to represent this indicator.
    a.) This could be impacted by maximum capacity at different State parks.
    b.) State parks could be impacted by hydrologic events that change the available recreational opportunities (may need to develop a way to normalize this).
11. Address and answer the question if water quality supports intended recreational uses.
12. Open data sets available at http://data.ca.gov.
13. Add some narrative about the opportunity to access water and how the amount available to access changes.
14. Indicator suggestions:
    a.) Number of designated protected recreational sites, by capturing if that number is increasing or decreasing over time.
    b.) Clarify and state the issues connected to access and water use.
    c.) Create a user survey through interviews that asks the public if they feel satisfied.
    d.) Number of miles of trails.
15. Reference the Marine Protected Areas/ Marine Life Protection Act survey for available data.
16. Consider the transportation hurdles that could constrain accessibility and opportunity for recreational activities.
17. Include an indicator under the intended outcome, preserved and increased natural areas with aesthetic or intrinsic value, focused on effects of algal blooms.
    a.) Warning and effect on recreation and accessibility.
    b.) State Water Board has a portal that has algal bloom report tracking.
18. Include a metric that helps take care of the water resources, such as picking up trash at an event or helping with restoration events.
19. The number of swim advisories should be included in this section.
20. Consider an indicator to be the percentage of different income level population with access to water-related outdoor recreational spaces.
21. Issue of affordability goes hand-in-hand with a healthy economy.

[4] This was referencing existing recreational survey data.

22. Priority indicators could include tribal communities with access to recreational land, the number of participants in education and recreation, open space acreage, and Williamson Act enrollment.

Healthy Economy Sustainability Indicators

Megan Fidell, DWR, provided an overview on the intended outcomes and indicators for the societal value, Healthy Economy. She explained that productive water uses are based on a reliable water source. She noted that people expect to always have water available, even if at a cost. She provided a recap of each of the intended outcomes. The intended outcomes are identified as:

- Reliable water supplies of suitable quality for a variety of productive uses. Productive water uses are based on a reliable supply.
- Consideration of economic risks and rewards on floodplains, rivers, and coastal areas.
- More benefits from economic activities, including from reduced costs to provide a given level of service (including transaction and permitting costs).
- Reduced likelihood or occurrence of significant social disruption following a disaster.

She explained how some of the indicators are very rough and have been adjusted from feedback that the team has received. She stated how there is still a lot of room for improvement and how some of these categories overlap into other areas as well.

Kamyar Guivetchi, Manager, DWR, explained how the basic set of indicators should be applied at different scales. The team would like to be able to have them applied at a statewide level but sense they may be most effective at a local and regional scale. He prompted the group to think of the indicators, not at a statewide scale, but how to effectively apply them at local levels.

Discussions

After a review of the workbook information, the group was asked their general impressions of the indicators, and for red flags or any improvements they had. Some suggestions from the group included:

1. Think about the differences between state versus regional economies and how they are correlated to water resource management.
   a.) State economy and a state of regional economies.
2. Need to factor in the adjusted approach and transition for an increasing population at a regional scale.
3. Urban water management plan predictions, compared to their actual performance, could be an indicator to track trends.
4. Loss of business as a result of drought could also track trends related to available water supply.
5. Consider the unintended outcomes that are consequences of some of these outcomes.
   a.) Example: A campaign resulting in loss of green lawns could lead to another problem such as increased electricity use.
6. Clarify the term assets and understand the limited group that can produce money.
7. Create an additional outcome on regional resilience such as reliance on the Delta and the economy.
8. Concern that some of the indicators relating to reliable water supplies do not depict the quality of water.
9. Important to include water recycling and reuse as well as desalination in reliable water supplies.
10. Reference the number of communities with an excess water balance.

11. There was a question regarding how the team will measure the indicators that change from positive to negative related to agriculture.
12. Clarify the reliability of the State Water Project (SWP) and the Central Valley Project (CVP) and how this will be measured.
13. Important to note other important delivery systems besides the SWP and CVP, such as the Metropolitan Water District's Colorado River Aqueduct.
14. Measuring GDP per volume of water can be a tricky metric because of the averaging effect; it can mask high water use activities.
15. A reliable water supply directly impacts the economy from the people.
16. Dedicate some amount of the emergency storage in addition to carryover storage.
17. Idea to combine water use with water supply to create a water-stress metric.
18. Develop an indicator that relates to land-use siting metric for improvements to flood and infrastructure safety.
    a.) Do not site housing in flood prone zones.
19. Develop an indicator for water supply reliability, groundwater subsidence, and sea water intrusion.
20. Restate how this section will capture the tradeoffs and reallocation of costs.
21. Challenge each region to come up with appropriate metrics for their area and then have a statewide metric that determines if all necessary areas were covered.
22. Need to create a linkage between groundwater sustainability plans and third parties to bridge the data gap and achieves data integrity.
23. Emergency preparedness plans should be moved to public health and safety.
24. Identify available workforce as an indicator.

Ecosystem Vitality Sustainability Indicators

Tom led the section on the sustainability indicators corresponding to the societal value, Ecosystem Vitality. The intended outcomes are identified as:

- Maintained and increased ecosystem and native species distributions in California while sustaining and enhancing species abundance and richness.
- Maintained and improved ecological functions and processes vital for sustaining ecosystems in California.
- Achieved designated beneficial uses for water bodies throughout the state.

Tom explained the history on the development of the indicators. He specified how the team started internally by interviewing DWR staff which led to communicating with branches outside of the DWR. The team reached out and contacted other State agencies, organizations, and local entities. He emphasized how cross-over exists between each of the different societal values and as a team they have struggled with proper placement of these indicators. Most of these indicators can fit toward each societal value. He stated the evolutionary process as follows:

Enable → Change → Benefit → Sustain

The team has shortened the list of indicators with the purpose that each one is multifaceted and contains a variety of metrics. Tom explained how the indicators are composites and walked through a few examples

presented in the workbook. He pointed out that there is going to be a tool box developed that will properly address and categorize the outcomes. He reiterated that the team started out at a statewide perspective but came across obstacles associated with the diversity of the state, thus changing the overall scope to focus on regional levels.

Lisa presented the group with the analogy of a statewide report card in terms of sustainable water management through each of the societal values. She asked the group if they felt that the team was measuring the right things and if they would have confidence based on what has been presented here. This was a great transition to the discussion focused around what needs to be included that can guide future investments and planning.

Discussion

After a review of the recommendations the group was asked their general impressions of the indicators, and any red flags or improvements they had. Some suggestions from the group included:

1. Consider including an indicator for aquatic life beneficial uses with the metric as number of water bodies with impaired aquatic life uses.
2. Consider how the economics vary based by region and how ecosystems can change accordingly. Different areas suffer at different times:
   a.) Tribal communities' relationship impacted with the environment in Northern California as a result of a poor ecosystem
3. Concern that non-native species is an impractical measure. Where is the line drawn for ecosystem vitality species, pre- and post-European ancestors?
4. Number of days of beach, river, lake, and park closures could be potential indicators.
   a.) Specify reasons for closure (example: sewage and toxic released upstream).
5. Highlight the relationship between number of impaired water bodies and agriculture.
6. Other species and ecosystems should be included such as wetlands, forests, shorebirds, amphibians, and pollinators.
7. Found it beneficial when indicators connected to existing from previous indexes.
8. Consider aquifer health and condition as an environmental asset that is linked to public benefit. Aquifer health degradation has led to subsidence and other negative factors. Improvement can further incentivize groundwater recharge and aquifer remediation.
9. The number of water bodies on the U.S. Environmental Protection Agency impaired water body list should be clarified and defined as the number of water bodies impaired for human health beneficial uses. This would cover:
   a.) Municipal and domestic supply.[5]
   b.) Water contact recreation.[6]
   c.) Commercial and sport fishing.[7]
   d.) Could also include future listings for tribal subsistence fishing and subsistence fishing.[8]
   e.) Could also be connected to agriculture.

[5] Reference MUN
[6] Reference REC-1
[7] Reference COMM
[8] Reference T-SUB and SUB

10. Need to clarify the context and definition of what an altered environment is, and how it can be used as a baseline comparison.

Public Health and Safety Sustainability Indicators

Jason Sidley, DWR, introduced the audience to the sustainability indicators under the societal value of Public Health and Safety. He specified that this section focused on water supply, water quality, and water safety. These intended outcomes are used to help lead proper water management practices. The intended outcomes are identified as:

- A reliable water supply for domestic needs, sanitation, and fire suppression.
- Reduce number of people exposed to waterborne health threats such as contaminants or infectious agents.
- Reduced loss of life, injuries, and health risks caused from extreme hydrologic conditions, catastrophic events, and/or system failures (including infrastructure).

Jason walked through each of the potential indicators under this list of outcomes. He explained that the work done on the statewide flood management plan started to develop this framework and that led to an approach of managing toward outcomes. Their flood planning efforts have morphed through the Water Plan and so the team has started to work on completing a similar thematic assessment (flood, water supply, etc.) at a statewide policy level. The scaling of the high level "policy scale" would have the capacity to roll down into more defined and obtainable indicators at a smaller scale. Jason emphasized that the importance of the assessment is not that it is being performed now, but that it includes the repeatability component and the trend analysis. This is the crux of the assessment that will help progress California toward sustainable water management.

Discussion

After a review of the recommendations the group was asked their general impressions of the indicators and for any red flags or improvements they had. Some suggestions from the group included:

1. Include a metric for tracking the completion of emergency preparedness plans.
2. Consider water quality problems associated with hydraulic wells.
3. There was a comment about invasive species harm to public health and how there has been progress to stop invasion (example: zebra mussels).
4. Idea to reach out for government support in developing a place where people can bring in water samples to be tested for contaminants. There can be limits and parameters for the size and quantity of the water sample.
5. Ensure that the plans are communicated, distributed, and advertised to the public. There is a need for public education regarding public health and planning.
6. The number of fish consumption advisories should be in this section.
7. Concern with the water-bottle metric that it can become too complicated and broad.
8. Number of private wells is neither good nor bad, suggestion to look at the portion of wells that have gone dry.

9. Concern associated with working definition of sanitation. People usually associate it with toilet and sewage treatment, but it can be a larger scale of the domestic needs such as cooking, bathing, and washing.
10. On person expressed concern that the Legislature will not focus on people exposed to water borne health threats.
11. Instead of tracking 5 total maximum daily loads (TMDLs)[9], track the number of TMDLs that address the water bodies that are impaired for human health uses.
12. Under emergency supply, consider liquid asset property that defines the percentage of families with less than, or equal to, three months savings at the poverty level.
13. Address and cleanup work on the unreliability of small systems.

Next Steps and Closing Remarks

The audience was thanked for their time and feedback. Kamyar stated how valuable and important their involvement has been for Update 2018. He introduced the upcoming partnerships that will help contribute to the success of this update. He noted that the team is in the process of partnering to initiate a pilot study that will assess the sustainability indicators and funding tool as a way to achieve regulatory alignment.

Lewis recaptured that the team will honor and reflect the comments and feedback received from this workshop and other previous workshops. The team will incorporate these insights into the Sustainability Outlook that will include the five-year implementation investment and funding plan strategy.

- Please submit workbook comments to Tom Filler (thomas.filler@water.ca.gov) as soon as possible.
- Upcoming meetings and workshops:
    - August 22 – Tribal Advisory Committee Webinar.
    - August 23 – Public Advisory Committee, Health Services Training Center, Sacramento, CA.
    - September 27- Plenary Meeting, McClellan Business Park, Wildland Fire Conference Center.
- Public Review Draft Release Date: February 2018.
- Sustainability Outlook Pilot Study.

[9]A term from the U.S. Clean Water Act. A total maximum daily load is a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards. The initials TMDL stand for the total maximum daily load permitted for the identified pollutants.

ATTACHMENT A

Attendance (48)

Workshop Attendees	
▪ Bob Gore	▪ Abdul Khan
▪ Cassandra Enos- Nobriga	▪ Alan Nino
▪ Cora Kammeyer	▪ Alex Cole-Weiss
▪ Edgar Fandialan	▪ Anna Garcia
▪ Fred Silva	▪ Betty Yee
▪ Jonathan Young	▪ Bob Harrington
▪ Lindsay Swain	▪ Brenda Tomaras
▪ Rick Johnson	▪ Bryan Martinez
▪ Robyn Grimm	▪ Carolyn Berg
▪ Sasha Wisotsk	▪ Cathy Pieroni
▪ Tien Shiao	▪ Courtney Howard
▪ Patrick Lowe	▪ Danielle Coats
▪ Richie Magallon	▪ David Bradshaw
▪ Mandy Jiang	▪ Jeff Stephenson
▪ Mladen Bandov	▪ Jelena Hartman
▪ Maury Roos	▪ John Ricker

Water Plan Team	
▪ Emily Alejandrino	▪ Elizabeth Patterson
▪ Francisco Guzman	▪ Tom Filler
▪ Jason Sidley	▪ William O ’Daly
▪ Jenny Marr	▪ Christine Kohn
▪ Kamyar Guivetchi	▪ Dani Davis
▪ Lewis Moeller	▪ Kari Shively
▪ Megan Fidell	▪ Lisa Beutler
▪ Todd Thompson	▪ Vanessa Nishikawa